GROUP C.5

EMERGENCY FUEL PUMP (CODE EF)

LIST OF CONTENTS

Introduction

1. This group contains the description and operation, of the emergency fuel pump installation of this aircraft, together with information on the servicing required to maintain the installation in an efficient condition. Routeing and theoretical circuit diagrams are also included. For a general description of the aircraft electrical system reference should be made to Group A.1, A.2 and A.3 of this chapter. Detailed information on the standard items of equipment used in the circuit will be found in the Air Publications listed in Table 1.

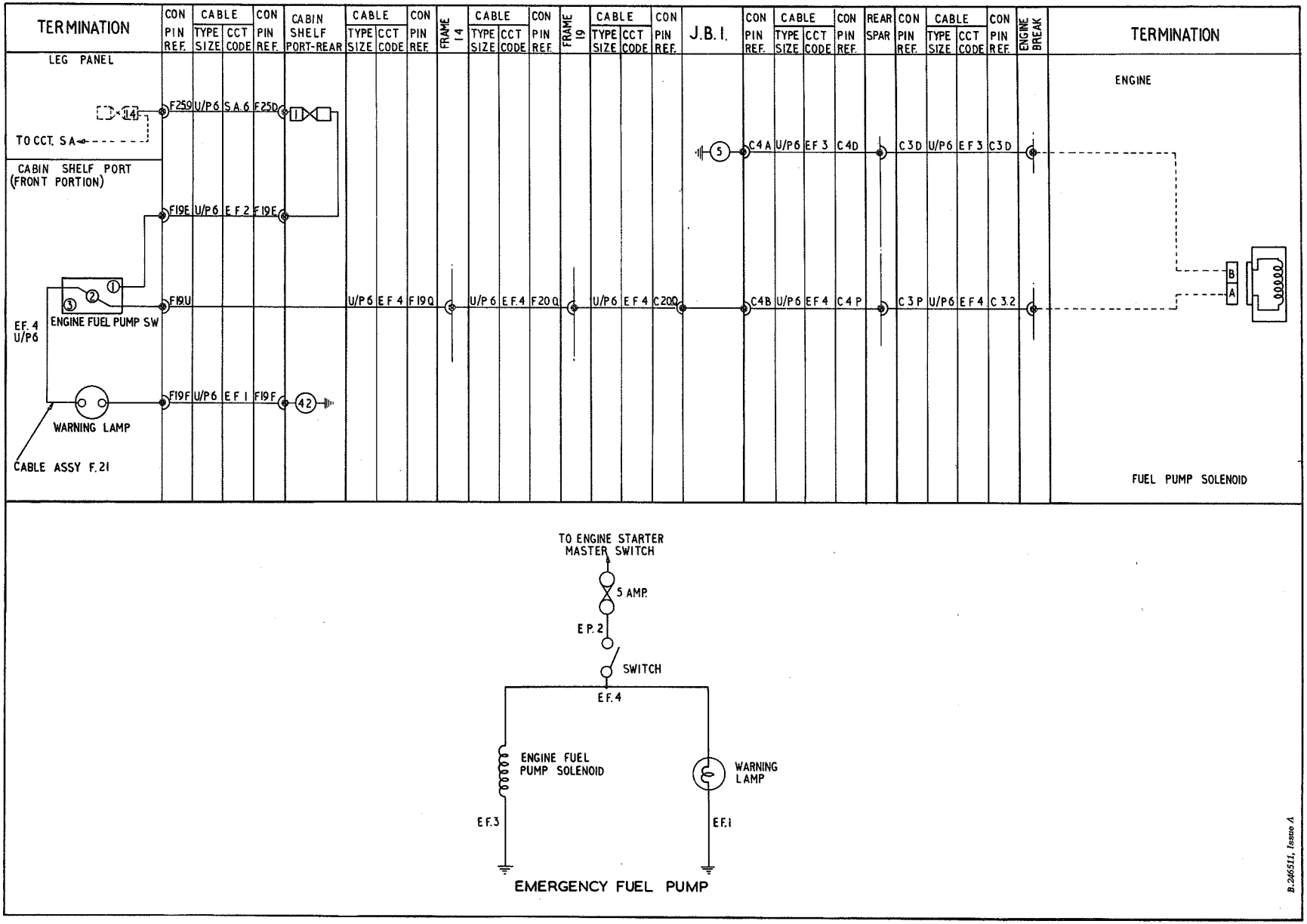

Fig. 1. Emergency fuel pump (routeing and theoretical)

RESTRICTED

TABLE 1

Equipment type and Air Publication reference

Equipment	Air Publication
Tumbler switch, S.P./ON-OFF Type XD779/3	A.P.4343C, Vol.1, Book 1, Sect.1
Solenoid valve, Refer Engine Handbook	A.P.4343E, Vol.1, Sect.1
Warning lamp, Type A	A.P.4343E, Vol.1, Sect.18

DESCRIPTION

Equipment details

2. The engine fuel system includes a duplex fuel pump. The two pump sections operate to supply fuel under the control of a servo system which includes a barometric control unit. The system is described in detail in A.P.4321G,J,L,N,U & V, Part 1, Sect.1.

3. The installation includes a solenoid-operated isolating valve fitted to the upper pump. With the engine master switch set to the ON position, the solenoid may be energized by setting the ISOLATED/NORMAL control switch to ISOLATED. This switch is mounted on the forward section of the cabin port shelf. A warning lamp mounted adjacent to the switch is illuminated when ISOLATED is selected.

Operation

4. If the servo control pump delivery fails, the servo pressure will either fall to zero or stabilize at some fixed valve. If the servo pressure fails entirely, the servo pistons of both pumps will move to full-stroke position but if the servo pressure settles to a fixed value the resulting pump swash plate angle may not allow sufficient fuel delivery pressure to be developed. This can be corrected by setting the solenoid control switch to ISOLATED; the fuel pump solenoid on the upper pump is then energized and this pump is isolated from the servo pressure. The pump swash plate moves to full stroke position and the warning lamp lights to indicate that the emergency condition is in being.

SERVICING

General

5. General servicing of the aircraft electrical system is described in Group A.1. All other servicing instructions, together with the equipment to be used, the standard serviceability tests and the method of conducting the tests, are given in the Air Publications listed in Table 1. Before any servicing is carried out, the aircraft must be rendered electrically safe as explained in Sect.5, Chap.1, Group 1A.

REMOVAL AND ASSEMBLY

General

6. Once access has been obtained the removal and assembly of the electrical components forming the emergency fuel pump circuit should present no difficulty. The removal of the forward portion of the cabin port shelf, which carries the isolating switch and warning lamp is fully described in Group A2, and the location and access to all the equipment is detailed in Group A3.